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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,344	09/22/2005	Nicolas Villain	FR 030033	1254
24737 7590 05/08/2008 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
CWERN, JONATHAN				
ART UNIT		PAPER NUMBER		
3737				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/550,344

**Applicant(s)**

VILLAIN ET AL.

**Examiner**

Jonathan G. Cwern

**Art Unit**

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on March 18, 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

The abstract of the disclosure is objected to because there is means language. Correction is required. See MPEP § 608.01(b).

### *Claim Objections*

Claims 1-11 objected to because of the following informalities:

In the rejection on 10/18/07 the examiner advised the applicant to remove citations in parentheses. It appears that the applicant has removed **only** the parentheses, and not the reference characters within them. The examiner's intention was for the parentheses and the reference characters within them to be removed. The examiner apologizes for the confusion. The removal of only the parentheses has made the claim language confusing, and it is recommended to remove the reference characters as well.

In claim 5, line 1, it is unclear as to what "it" refers to.

Claim 6 sets forth functional language unsupported by structure to produce such functions.

In claim 11, it is not clear what "they" and "the latter" refer to.

Also, it appears that although applicant's claims filed on 1/18/08 corrected other claim objections from the office action on 10/18/07, these corrections were not carried through to the claims re-filed on 3/18/08:

In claim 8, on line 5, "collection means" should be "correction means".

In claim 10, on line 2, "regions map" should be "sub-regions map".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is improper means plus function language throughout the claims. It is also unclear as to how one "calculates" a map. The use of the term "intended" throughout the claims render the claims vague and indefinite. In addition, the term "sub-means" is also improper means plus function language. Claim 9 is confusing, it is unclear how forming a volume of digital data differs from acquiring a volume of digital data. It is also unclear as to whether or not the same data is being referred to in both claims. Also in claim 9, it is unclear as to whether there should be an "and" on line 2, after "1,".

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 10 and 11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to non-statutory subject matter because the claims do not contain a useful, concrete, and tangible result.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Demonceau et al. (US 6389310).

Demonceau et al. show, acquisition means to acquire a volume of 3D data comprising an object of interest (column 18, lines 40-55); segmenting a region of interest comprising the object of interest within the volume (column 28, lines 25-30); displaying a 2D representation of the volume and segmented region of interest (column 31, lines 40-50); calculation a sub-region map within the segmented region (watersheds used to removed segments at the border of the image and segments isolated in the background, this new image caused by watershed segmentation can be called the sub-region map, column 28, lines 30-50); excluding sub-regions from the region of interest using the sub-region map (column 28, lines 30-50). Demonceau et al. also show, calculating a map of distances (distances are used to identify and segment the Aorta

Descendens, the combination of these calculated distances can be called a "map of distances", column 21, lines 1-25; a map of distances is also used to correct for movement of the Valvular Plane, again the combination of the calculated distances can be called a "map of distances", column 25, lines 10-25); merging sub-regions (column 22, lines 20-45); user control to select sub-regions for exclusion (column 32, lines 5-35); updating the 2D representation to take into account effects of the excluded regions (the 2D displays can be calculated earlier in case the user makes no changes, this implies that if the user makes changes, the 2D displays will have to be updated, column 31, lines 40-50; further discussion of user control, two-dimensional representation, and displays can be found in column 31, line 50-column 39, line 15, wherein the user makes changes if desired to re-segment the image, the 2D representations are made and then displayed); labeling the sub-regions (column 20, line 27); forming a volume of digital data including the object of interest (forming is taken to mean reconstructing the data, column 18, lines 45-55); and a computer program product (column 3, lines 25-40).

It should be noted that specific examples are given above for each claim, however they can be interpreted in a variety of ways. Demonceau et al. teach a method involving segmenting an image to label each part of the heart. The entire heart can be considered the region of interest, and each part of the heart can be considered a sub-region or sub-region map. And in finding and segmenting out each part of the heart, Demonceau et al. are excluding certain sub-regions from other sub-regions. In other words, the very act of segmenting involves excluding one region from another region! There are various segmentations performed in each step to isolate individual regions of

the heart. In addition, there is a broader segmentation performed at the end in which the user can choose to segment the images again based on the user's preference. All of these different segmentations should be considered, as any can be considered the overall region of interest, or a more specific sub-region map.

### ***Response to Arguments***

Applicant's arguments filed 3/18/08 have been fully considered but they are not persuasive for the reasons discussed above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Cwern whose telephone number is

(571)270-1560. The examiner can normally be reached on Monday through Friday 9:30AM - 6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jonathan G Cwern/  
Examiner, Art Unit 3737

/Ruth S. Smith/  
Primary Examiner, Art Unit 3737